

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A radio-frequency filter arrangement comprising:
a filter, which has a number of cavities which are coupled to one another for radio-frequency purposes and in each of which a ring-like dielectric resonator element is arranged in a fixed position, each ring-like dielectric resonator element having therein an eccentric cutout wherein the axis of the cutout is offset from the axis of the ring-like dielectric resonator element,
and
~~and in each of which a dielectric body is provided~~ disposed in each cutout so as to be rotatable with respect to the cutout and, whose so that a position of the dielectric body relative to the dielectric resonator element can be varied in order to tune the frequency of the filter,
~~wherein the dielectric body is arranged in an eccentric cutout in the dielectric resonator element,~~
~~and in that the dielectric body is arranged in the eccentric cutout such that can rotate.~~
2. (Currently amended) The radio-frequency filter arrangement as claimed in claim 1, wherein the dielectric resonator element is in the form of a planar, round circular disk, and in that the dielectric body can rotate about a rotation axis which is at right angles to ~~[[the]]~~ a plane of the disk ~~[[plane]]~~ of the dielectric resonator element.
3. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 2, wherein the dielectric resonator element has a predetermined thickness, and in that the dielectric body has a height in the direction of the rotation axis which is essentially equal to the thickness of the dielectric resonator element.
4. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 2, wherein the cutout in the dielectric resonator element is a circular cylindrical through-hole which is concentric with respect to the rotation axis.

5. (Currently amended) The radio-frequency filter arrangement as claimed in claim 4, wherein the external dimensions of the dielectric body are matched to the cutout in the dielectric resonator element in such a way that ~~the two~~ dielectric body and dielectric resonator element are separated from one another by only narrow air gaps.
6. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 5, wherein the dielectric body is bounded by two parallel planar surfaces in a first direction at right angles to the rotation axis, and is bounded by two cylindrical envelope surfaces which are concentric with respect to the rotation axis, in a second direction, which is at right angles to the rotation axis and to the first direction.
7. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein the dielectric resonator element has a central through-hole.
8. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein the dielectric resonator element and the dielectric body are each composed of the same material.
9. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein the at least one filter is accommodated in a preferably rectangular filter housing, in that the filter housing is formed from a base plate and wall plates, which are at right angles to the base plate for the side walls, and is covered on the top face by a motor mounting plate, which is parallel to the base plate, and in that the cavities in the filter are formed by separating plates which are incorporated in the filter housing and are at right angles to the base plate.
10. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 9, wherein mounting slots are provided in the base plate, in the wall plates and in the separating plates, by means of which the plates are plugged into one another and are connected to one another, in particular by being soldered.
11. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 9, wherein coupling openings, in particular coupling slots, are provided at predetermined points in individual separating plates.

12. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 9, wherein a preferably circular opening is provided in the motor mounting plate above each of the cavities, through which the respective dielectric resonator element and the respective dielectric body are held in the cavity.

13. (Previously Presented) The radio-frequency arrangement as claimed in claim 12, wherein the dielectric resonator element and the dielectric body are part of a tuning element which is associated with the cavity and is mounted on the motor mounting plate.

14. (Currently amended) The radio-frequency filter arrangement as claimed in claim 13, wherein the tuning element in each case has a fixed holder, which passes through the opening in the motor mounting plate, for the dielectric resonator element, a holder which passes through the opening in the motor mounting plate and is mounted such that [[it]] the holder can rotate, for the dielectric body, a motor and a gearbox unit, which transmits the rotational movement of the motor to the holder, which is mounted such that [[it]] the motor and gearbox unit can rotate.

15. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 14, wherein the motor is a stepping motor.

16. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 14, wherein the gearbox unit is accommodated in a housing, in that the housing is mounted on a motor mounting plate, in that the motor is flange-connected to the housing, and in that the holder for the dielectric resonator element is attached to the housing.

17. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 16, wherein the gearbox unit has a rotating element which is in the form of a shaft, is mounted in a prestressed precision bearing and is firmly connected to the holder for the dielectric body, and in that the rotating element is driven by a drive shaft within the gearbox unit via a gearwheel which is firmly seated on the rotating element, with the drive shaft being connected to the motor and engaging with the gearwheel via a worm gear.

18. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 17, wherein the rotating element is prestressed in the rotation direction in order to overcome play, preferably by means of a spiral spring.

19. (Currently Amended) The radio-frequency filter arrangement as claimed in ~~one of claims~~ claim 17, wherein the gearwheel is designed in the form of a circle segment.

20. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein each of the filters has four cavities with dielectric resonator elements and dielectric bodies which can rotate arranged in them.

21. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 20, wherein the four cavities are arranged adjacent to one another in a square.

22. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 20, wherein a number of filters, each having four cavities are arranged alongside one another in a common filter housing.

23. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein the cavities are coupled by means of coupling slots which are each arranged on a vertical center plane of the cavities to be coupled, and in that the eccentric cutouts in the dielectric resonator elements are arranged rotated through a predetermined angle, preferably about 57°, from the vertical center plane about the axis of the dielectric resonator element.

24. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 1, wherein a controller, which has a control block, a memory and an input unit, is provided in the eccentric cutouts in the dielectric resonator bodies in order to control the rotation of the dielectric bodies.

25. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 24, wherein position sensors, in particular in the form of light barriers which are connected to the control block, are provided in order to determine the initial position of the dielectric bodies in the radio-frequency filter arrangement.

26. (Previously Presented) The radio-frequency filter arrangement as claimed in claim 24, wherein value tables are stored in the memory and associate an appropriate angle position of the dielectric bodies with a small number of selected frequencies of the radio-frequency filter arrangement.

27. (Previously Presented) A method for production of a radio-frequency filter arrangement as claimed in claim 1, wherein a number of planar sheet-metal parts are connected to a filter housing in order to form the cavities.

28. (Previously Presented) The method as claimed in claim 27, wherein the sheet-metal parts are silver-plated, and are soldered to one another by means of a silver solder.

29. (Previously Presented) The method as claimed in claim 28, wherein the sheet-metal parts have mounting aids, in particular in the form of crossing slots, mounting slots and mounting lugs which are matched to one another, in that the sheet-metal parts are initially loosely plugged together by means of the mounting aids and the crossing slots, mounting slots and mounting lugs in order to form the filter housing, and the plugged-together filter housing is made mechanically robust by pushing the mounting lugs into the mounting slots, in that silver solder, preferably in paste form, is applied to the junction points between the plugged-together sheet-metal parts, and in that the plugged-together sheet-metal parts are heated, preferably in an oven, until the silver solder melts and flows into the junction points.

30. (Previously Presented) The method as claimed in claim 27, wherein all of the sheet-metal parts of a filter housing are cut from a common metal sheet, which has not been silver-plated, by means of a cutting method, preferably by means of laser cutting, in such a way that the cut-out sheet-metal parts are connected to the remaining area of the metal sheet only by a small number of narrow webs, in that the metal sheet together with the cut-out sheet-metal parts is then silver-plated, in that the sheet-metal parts are detached from the metal sheet after being silver-plated, and are then used to construct the filter housing.

31. (Previously Presented) The method as claimed in claim 30, wherein the webs remain predominantly at those points on the sheet-metal parts which are located outside the cavities when the filter housing is complete.